YR5 Knowledge Organiser - Percentages

Key Concepts

- Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal

- Solve problems which require knowing percentage and decimal equivalents of one half, one quarter, one fifth, two fifths, four fifths and fractions with a denominator of a multiple of 10 or 25
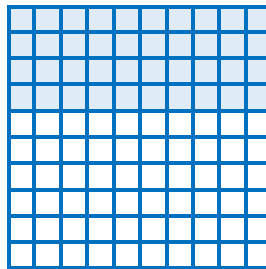
Key Vocabulary

- per cent / percentage
- fraction
- denominator
- decimal
- equivalent
- amount
- value
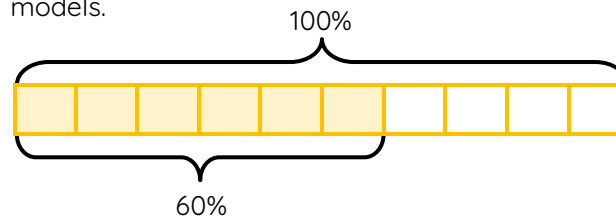- proportion

Understand Percentages

Per cent means the 'number of parts per hundred'. We use the symbol % to represent a percentage.

Visual representations can help us to understand percentages. Hundred squares clearly show the different parts of a hundred.

"There are 34 parts per hundred shaded so 34% of the grid is shaded."

We can also represent percentages with bar models.

100%

60%

Percentages as Fractions and Decimals

We can represent percentages as fractions using the denominator 100 and as decimals using hundredths.

$$72\% = \frac{72}{100} = 0.72$$

Equivalent F.D.P.

There are some common fraction, decimal and percentage equivalents which are useful to know.

$\dfrac{1}{2}$ = 0.5 = 50%

$\dfrac{1}{4}$ = 0.25 = 25%

$\dfrac{1}{5}$ = 0.2 = 20%

$\dfrac{2}{5}$ = 0.4 = 40%

$\dfrac{3}{5}$ = 0.6 = 60%

$\dfrac{4}{5}$ = 0.8 = 80%

We should also recognise percentage equivalents for fractions with a denominator of a multiple of 10 or 25.

$$\frac{42}{70}\,\frac{\div 7}{\div 7}\, = \frac{6}{10} =$$

$$\frac{21}{25}\,\frac{\times 4}{\times 4}\, = \frac{84}{100} = 84\%$$

We can use this knowledge to solve problems.

Alfie scored 38 out of 50 in his maths quiz and 270 out of 300 in his science quiz.
In which quiz did he score the highest?

"38 × 2 = 76 so I scored 76% in my maths quiz. 270 ÷ 3 = 90 so I scored 90% in my science quiz. I had a higher score in science."